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TITLE: A SOLUTION OF METAL-POLYMER CHELATE(S) AND APPLICATIONS THEREOF

Amendmend E: Remarks

42. (new) A solution of metal-polymer chelates for immobilization of a biological protein bearing biological molecules in a carrier containing at least one metal-polymer chelate, the solution for assisting in a fermentation preserving process,the solution comprising by weight:
carrier structure having a 0.1 -99.86 percent water, 0.01 - 20 percent
hydroxyl group bearing polymers having at least one carbohydrate molecule, and 0.0001 to 20 percent of metal salt having at least one metal ion;
carboxyl and amino groups combined with said a carrier structure for the carrier, the carboxyl and amino groups comprising 0.01 – 39.90 percent of a carboxyl group bearing molecules having at least one carboxylic acid, and 0.01 - 20 percent of an amino group bearing molecules having at least one ammonia; and
a mixture of the chelates forming a chain which contains positive and negative polar
functional groups, the chelates mixed with a trace percent of biological proteins having biological molecules into a bio-carrier, the bio-carrier being selected from the group consisting of gaseous state, a powder, metal of nanometer size, an inorganic, an organic/inorganic, a fluid, a semi-fluid, a conductor, a semiconductor, a thin-film, a fiber, a chip, a cell and bio-tissue.

※ Point

Claim42 →A solution of metal-polymer chelates for immobilization of a biological protein bearing biological molecules in a carrier containing at least one metal-polymer chelate,
→for immobilization of a biological protein bearing biological molecules →

@ A: The metal hybrid polymer solution can be developed further to provide novel biochemical enzyme systems and enzyme immobilization systems.(page1,2)

Now, the chemical solution and chemical state and chemical molecular structure are the same as those of chitosan which is a polymer hybrid and will become an artificial imitated chitosan solution containing metal ions and then bacteria or enzyme or smaller nucleic acid or partial cell body is added. It is not necessary to consider its nitration sources and metabolism issues After being

blended and shaken for a period of time (which is determined by the size of the reaction tank, and generally equal to two weeks), the metal ions excite the activity of the enzyme, and a rear end of theNH_2 group is connected to a protein enzyme, and an amino polysaccharide such as molassesm with a quick fermentation growth life, a super high concentration, a highly active cell body or bacteria or enzyme or nucleic acid solidifies a carrier to produce a biochemical solution having cell body or bacteria or enzyme or nucleic acid. If the solution of artificial imitated chitosan has a hydroxypropylmethyl cellulose (HPMC) with a higher molecular weight, the stability of bacteria or enzyme stability will be high, and the life expectancy will be long, and it will not be saccharified easily. If the molecular weight is low, then the CPS400 will be as follow:

Just like a common chitosan, it will be saccharified easily to turn into glycan, bacteria or enzyme, and the preservation cannot last too long, and its life expectancy is about one year. In general, the life expectancy of a normal pure chitosan solidified enzyme is very short, but the life expectancy will become one year if the metal ions are added,--- .(page17,18)

Carbohydrates such as monosaccharide are added and mixed evenly, and then the growth of bacteria or enzyme or tiny nucleic acid or partial cell body can be maintained, and its solidified structure includes: PVA-metal M-NH_2-protein enzyme-sugar, which is R-M-NH_2-protein enzyme-sugar, and such structure can preserve the bacteria with a long life. Since the PVA does not have asymmetric carbons, it only can maintain the life of bacteria without a good duplicating capability. If there are asymmetric carbons in the aforementioned situation, the life of bacteria can be maintained and a good duplicating capability is provided as well. Further, a polymer unit that is not saturated with fatty acid is taken for example, and an oil is added into the acetic acid, pure water, metal salts, ammonia water, monosaccharide and mixed evenly, and then bacteria or enzyme or smaller nucleic acid or partial cell body are added for the growth of fermentation, and its solidified structure includes: fatty acid-M-NH_2-protein enzyme-sugar, and such structure can maintain a long life for the bacteria. In fact, the hybrid of carboxyl and metal ions of the fatty acid and the hybrid structure produced by the allocated amino groups can solidify and fix the enzyme protein, since this fatty acid includes high-carbon molecular R, and others include organic carboxylic acid. If there is no R that includes more carbons, and thus it cannot produce hybrid at a leading position, and thus the structure of this type of fatty acid-M-NH_2-protein enzyme-sugar is a reprint of cell tissues. (page22,23)

For example, a disaccharide such as sucrose having a low molecular weight is added with acetic acid, pure water, metal salts, ammonia water and mixed evenly, and then bacteria or enzyme or smaller nucleic acid or partial cell body is added for the fermentation and growth, and the solidified structure includes:sucrose-M-NH_2-protein enzyme, and this kind of structure does not need the assistance of carbohydrates, because it already has sucrose, and thus the life of bacteria can be maintained very long. Another protection of the sucrose resides on that the whole dry sugar cane can be cut into small pieces so that they cannot be separated from the bagasse, and the juice of sugar can will not turn rotten because of the protection provided by such dry sugar cane fiber, and then

acetic acid, pure water, metal salts, ammonia water are applied and mixed evenly, and the bacteria or enzyme or smaller nucleic acid or partial cell body can be fermented and grown, and its solidified structure includes:R-sucrose-M-NH_2-protein enzyme, wherein R refers to a dry sugar cane fiber (plant fiber). Assumed that monosaccharide, acetic acid, pure water, metal salt, ammonia water are mixed evenly, a polymer hybrid will not show, but only a single scattered micromolecular hybrid shows, and they cannot be connected into a whole piece, so that the stability and constancy of fermentation is very limited. The fermentation used to achieve the metal in a nano scale is not very effective, since the overall current is not driven. If polymer bridging agent or plant fiber or inorganic polymer carrier (including inorganic and organic bridge inorganic polymer or nano inorganic polymer) imitates the theory of a dry sugar cane fiber, the fermentation and metal nano condition of a small hybrid molecule at the connecting portion can be improved. Therefore, the formula also can be applied to the arrangement of mixing monosaccharide, acetic acid, pure water, metal salts, ammonia water evenly and adding polymer bridging agent or plant fiber or inorganic polymer carrier,----- (page25)

The half cycle achieved by the carrier system in accordance with the foregoing technology is very long, and is almost unlimited. It is one kind of biological reactors capable of continuously performing the biotransformation by a mobile blending reactor or a fixed-bed reactor or a moving bed reactor or super filtering film separating reactor, and the metabolite can be filtered and separated easily, and the purified metabolite can be removed by the bacteria in the body by microfiltration or disinfection or other method. Another kind of biological reactors is a fatty acid-M-NH_2-protein enzyme-sugar in a semi-solid gel (a filtered solution including carboxylic acid) mixed with a R (a fiber having carboxylic acid or carboxyl resin) can imitate the tissue of human body or animal cell, which is condensed and bridged like internal organs and fixed in the included layers. By then, the slow loop refers to the nutrition solution, and a specific metabolite is cultivated, and then the cultivation is specified. The description above shows a metal hybrid polymer solution used for the cultivation and purification of the biological cell or bacteria or protein enzyme and their metabolites. (page28)

The SARS proteins and fruit foxes can coexist, but the varied proteins will behave irregularly in the carrier of the cells in human body cell and the adaptability does not exist anymore. In other words, we are sure that the variation of the gene-cell performance shows us that the fruit fox and the carrier of the cells of human body are different. For example, the bird flu will be varied to infect a human body, and a long-term cell carrier is incompatible to a 45-day growth hormone, and thus the size and stability of the enzyme and the adaptability of the carrier of cells are related to the performance of the genes. Therefore, special applications for gene-cell tissues can be developed. (page29)

Now, the monosaccharide-M-NH_2-DNA (already fermented from the plant fibers) is "grafted", and then the position where the plastic insulating film and monosaccharide-M-NH_2-DNA are attached is washed. We also can set the M on the monosaccharide-M-NH_2-DNA as a transmitting

pulse for the metal (such as silver) if needed. It is a biological integrated circuit, and the amino resin or inorganic matter such as polylysine or aminosilane is a fermented metal hybrid polymer solution. With the solid-liquid separation of the solution (since there is no amino enzyme, the preservation does not last long), the "grafting" as described above will be conducted immediately for the amino resin or inorganic matter such as the polylysine or aminosilane chip carriers.

In a microfluidic electrophoretic chip, a nano inorganic polymer is adopted for building its base; lithography is used for etching the designed path; testing sample and testing reagent are added into the microchannel; the protein adsorbing surface in the microfluidic chip is increased; and a high analytical sensitivity and a short testing time are achieved. This protein chip can be used for stabilized the activity of proteins in the carrier, such that protein engineers can obtain a large quantity of dedicated proteins used for fabricating the chips. (page42)

Embodiment 13

In the application of producing chemical substances in a plant (used for fermentations and nano applications), the composition in the percentage by mass is given as follows:

Bacteria-free water	90%
Vinegar or carboxyl acid	2%
Cytokinin-O-glucosides	2%
Calcium sulfate and various inorganic salts (added separately)	2%
Ammonia water	2%
Special DNA, RNA and/or enzyme of a plant	Trace

A carrier similar to partial cell tissue of a plant or a fatty acid-M-NH_2-protein enzyme-sugar carrier together with a solidification carrier (such as R-unhusked rice-NH_2-protein enzyme system) is cultivated. (page51)

※ Point

Claim42 →A solution of metal-polymer chelates for immobilization of a biological protein bearing biological molecules in a carrier containing at least one metal-polymer chelate,

→a biological protein bearing biological molecules in a carrier→→→→a bio-carrier

@ A: In early days, there were carriers for absorbing and neutralizing gases, but there was no carrier to deal with a solvent gas directly, and the reacting carriers at early days came with a very short life. However, the physiologically active life of the present hydroxypropylmethyl celluloses (HPMC) and other matters with special functional groups can be extended unlimitedly and

developed to be an artificial imitated chitosan solution containing metal ions, so as to provide high-efficiency, high-density, high-activation and long-life biological carriers. The metal hybrid polymer solution is used for gas detections and the solution also becomes a metal enzyme biocatalyst. (page1,2)

The bacteria or enzyme or nucleic acid or partial cell body is developed to a long-life, high-concentration bacteria or enzyme or nucleic acid or cell body carrier. .(page10)

DNA and RNA that uses the following cultivation and purification of the biological protein enzyme as a carrier (such as the R-unhusked rice-NH_2-protein enzyme system) to combine and include the monosaccharide bimolecule-M-NH_2-protein enzyme system, and it also can cultivate the chemical substances required in a plant. (page26)

Further, the R-chitosan and calcium-NH_2-protein enzyme can follow the foregoing method to purify the solution if high-purity high-yield cell or bacteria or enzyme or vaccine. The required enzyme solution can be filtered from the carrier, and those not used will be put back to the carrier for bridging and preserving the activity of the enzyme solution. Particularly, some vaccine or enzyme cultivation used for human bodies and animals does not require a carrier system accompanied to enter into a human body, and this kind of purifications is the most appropriate one because it is much simpler and easier than the technologies of affinity chromatography and anion-exchange chromatography (HPLC). If the fermented and purified matter does not need any remaining amino groups, the suspension and cultivation of amino resin or inorganic matter such as polylysine or aminosilane can substitute ammonia for the fermentation, and then the purification is a typical application of the metal hybrid polymer solution for the cultivation and purification of biological cell or bacteria or protein enzyme. (page27)

The half cycle achieved by the carrier system in accordance with the foregoing technology is very long, and is almost unlimited. It is one kind of biological reactors capable of continuously performing the biotransformation by a mobile blending reactor or a fixed-bed reactor or a moving bed reactor or super filtering film separating reactor, and the metabolite can be filtered and separated easily, and the purified metabolite can be removed by the bacteria in the body by microfiltration or disinfection or other method. Another kind of biological reactors is a fatty acid-M-NH_2-protein enzyme-sugar in a semi-solid gel (a filtered solution including carboxylic acid) mixed with a R (a fiber having carboxylic acid or carboxyl resin) can imitate the tissue of human body or animal cell, which is condensed and bridged like internal organs and fixed in the included layers. By then, the slow loop refers to the nutrition solution, and a specific metabolite is cultivated, and then the cultivation is specified. The description above shows a metal hybrid polymer solution used for the cultivation and purification of the biological cell or bacteria or protein enzyme and their metabolites. (page28)

A novel automatic fermentation method for carrier materials and the natural inorganic carrier of a honeycomb hole can produce many tiny bacteria and living organisms, since the inorganic

matter has numerous minerals and decayed ionization media, and the novel carrier materials are prepared based on the foregoing theory to form a carrier having an inorganic metal-polymer chelate and bacteria, and its major advantage is its waterproof function. For example, 7kg of PVA powder is added to water and dissolved into an aqueous solution, and then 15kg of silicic acid solution, 6kg of metal salts are added and mixed evenly, and then dipped into the carrier material, such that the carrier material can be dried slowly and sintered into a ceramic form. By then, the structure is a PVA-SI-M metal, and then chitosan solution including carboxylic acid is added to the ceramic carrier material, and a trace of bacteria is added into the chitosan solution and combined slowly with each other to form a PVA-SI-M-chitosan, and the bacteria will be fermented automatically and slowly on the whole carrier to form a PVA-SI-M-chitosan-protein enzyme. By then, the carrier of inorganic metal-polymer hybrid including bacteria has an inorganic system that can be used for related inorganic and organic applications. The PVA is added with silicic acid, and the –OH groups of the two are dehydrated to form a PVA-SI-M-NH_2-protein enzyme-sugar connecting structure. If the protein enzyme uses a protein enzyme for decomposing sugar and the alcohol to kill bacteria, a volatile solution is formed or heated, dried and disinfected to form a nano inorganic polymer film showing a PVA-SI-M, wherein silicon will not be precipitated from the reaction, and SI and M are both in a nano scale, and the PVA can use other R (polymer) including –OH coating layer and show a hybrid porous structure that has good adsorptability and it is a very good nano inorganic carrier and can be used as nano paint, nano particles entering this carrier or paint, and it is also a very good reacting structure. Through the metal hybrid, the fermented silicic acid becomes a very good inorganic medium. The nano inorganic polymer film, hole carrier, and sphere developed by the nano metal hybrid polymer solution (fermented) is more functional than those not in a nano scale. In general, PVA-SI-Ca is used to obtain a good stability and functionally a PVA-SI-other metal is preferred and used. This is one of the applications of the metal hybrid polymer solution used for nano inorganic matters. (page40)

Now, the monosaccharide-M-NH_2-DNA (already fermented from the plant fibers) is "grafted", and then the position where the plastic insulating film and monosaccharide-M-NH_2-DNA are attached is washed. We also can set the M on the monosaccharide-M-NH_2-DNA as a transmitting pulse for the metal (such as silver) if needed. It is a biological integrated circuit, and the amino resin or inorganic matter such as polylysine or aminosilane is a fermented metal hybrid polymer solution. With the solid-liquid separation of the solution (since there is no amino enzyme, the preservation does not last long), the "grafting" as described above will be conducted immediately for the amino resin or inorganic matter such as the polylysine or aminosilane chip carriers.

In a microfluidic electrophoretic chip, a nano inorganic polymer is adopted for building its base; lithography is used for etching the designed path; testing sample and testing reagent are added into the microchannel; the protein adsorbing surface in the microfluidic chip is increased; and a high analytical sensitivity and a short testing time are achieved. This protein chip can be used for stabilized the activity of proteins in the carrier, such that protein engineers can obtain a large quantity of dedicated proteins used for fabricating the chips. (page42)

※ Point

Claim42 → A solution of metal-polymer chelates for immobilization of a biological protein bearing biological molecules in a carrier containing at least one metal-polymer chelate, the solution for assisting in a fermentation preserving process,the solution comprising by weight:
carrier structure having a 0.1 -99.86 percent water, 0.01 - 20 percent
hydroxyl group bearing polymers having at least one carbohydrate molecule, and 0.0001 to 20 percent of metal salt having at least one metal ion;

→carrier structure having a 0.1 -99.86 percent water, 0.01 - 20 percent
hydroxyl group bearing polymers having at least one carbohydrate molecule, and 0.0001 to 20 percent of metal salt having at least one metal ion;

→a R-OH→→→→→

A :If the paper about:

A chemical compound having the same chemical conditions and functions as the chitosan includes a hydroxypropylmethyl cellulose (HPMC) and an amino group, and the metal ion acts as a medium for being a catalyst for the metal ions, such that the hydroxypropylmethyl cellulose (HPMC) can be mixed with NH_3. If the hydrogen of a R-OH functional group of the hydroxypropylmethyl cellulose (HPMC) is dehydrogenated and dehydrated by the metal such that NH_2 can be halfly bridged and combines with the hydroxypropylmethyl cellulose (HPMC) to produce R-NH_2. By then, this solution is a polymer hybrid having the same chemical solution, chemical state and chemical molecular structure as those of chitosan, and becomes an artificial imitated chitosan solution containing metal ions. The bacteria or enzyme or nucleic acid or partial cell body is developed to a long-life, high-concentration bacteria or enzyme or nucleic acid or cell body carrier. The imitated chitosan of the artificial imitated chitosan solution can be used in any area that the chitosan is used. The solution is fermented to produce a metal to a nano scale, and nano metal particles or nano metal oxides or nano complex metal oxides can be obtained by gas phase or liquid phase or combustion or carbonization methods. The imitated chitosan is developed into liquid crystal solution and other aspects for the applications in eight major enzyme systems. The principle for these eight major enzyme systems is similar to the principle described above. Regardless of having hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or disaccharide or monosaccharide or monosaccharide bimolecule, the imitated chitosan can be combined with the metal salts and then combined with carboxyl and amino groups to produce low to mid polymer metal-polymer cholates. Some enzyme systems use inorganic polymer carrier and/or plant fiber and/or carboxyl resin and amino resin or inorganic matter and/or enzyme system and the principle for the application in biochemical and nano areas. A chemical compound having the same chemical conditions and functions as the chitosan includes a hydroxypropylmethyl cellulose (HPMC) and an amino group, and the metal ion acts as a medium for being a catalyst for the metal ions, such that the hydroxypropylmethyl cellulose (HPMC) can be mixed with NH_3. If the

hydrogen of a R-OH functional group of the hydroxypropylmethyl cellulose (HPMC) is dehydrogenated and dehydrated by the metal such that NH_2 can be halfly bridged and combines with the hydroxypropylmethyl cellulose (HPMC) to produce R-NH_2. By then, this solution is a polymer hybrid having the same chemical solution, chemical state and chemical molecular structure as those of chitosan, and becomes an artificial imitated chitosan solution containing metal ions. The bacteria or enzyme or nucleic acid or partial cell body is developed to a long-life, high-concentration bacteria or enzyme or nucleic acid or cell body carrier. The imitated chitosan of the artificial imitated chitosan solution can be used in any area that the chitosan is used. The solution is fermented to produce a metal to a nano scale, and nano metal particles or nano metal oxides or nano complex metal oxides can be obtained by gas phase or liquid phase or combustion or carbonization methods. The imitated chitosan is developed into liquid crystal solution and other aspects for the applications in eight major enzyme systems. The principle for these eight major enzyme systems is similar to the principle described above. Regardless of having hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or disaccharide or monosaccharide or monosaccharide bimolecule, the imitated chitosan can be combined with the metal salts and then combined with carboxyl and amino groups to produce low to mid polymer metal-polymer cholates. Some enzyme systems use inorganic polymer carrier and/or plant fiber and/or carboxyl resin and amino resin or inorganic matter and/or enzyme system and the principle for the application in biochemical and nano areas.

A: From the above articles that the, a metal hybrid polymer solution, to be comprised by the following----
Was informed that the first articles to join the--

→water

hydroxyl group bearing polymers

Metal

@ A:" carrier structure :"→If the paper→
or other polymer (chemical substance-$OH)_n$ functional group solution;

or other polymer (chemical substance-$OH)_n$ functional group solution; ------(page7)

If the solution of other polymers (chemical substance-OH)n has functional groups or the solution of other polymers (chemical substance-OH)n having functional groups------(page22)

Chemical reaction→If the paper→FIG 3

R-OH→→→→→→

@ A: The implementation of cases in each of the polymer

Embodiment 1→Chitosan powder (amino group, hydroxyl group)

Embodiment 2→Nitrified sodium humate(carboxyl group, hydroxyl group)

Embodiment 3→Hydroxypropylmethyl cellulose (hydroxyl group)

Embodiment 4→Chitosan powder(amino group, hydroxyl group)

Embodiment 5→Hydroxypropylmethyl cellulose (hydroxyl group)

Embodiment 6→Humic acid(carboxyl group, hydroxyl group)

Embodiment 7→Polyvinyl alcohol(Acetic acid containing residual-based, hydroxyl group)

Embodiment 8→Hydroxypropylmethyl cellulose (hydroxyl group)

Embodiment 9→Sodium fatty acid (carboxyl group)

Embodiment 10→Polyvinyl alcohol, Carbohydrates

Embodiment 11→Fatty acid(carboxyl group), Carbohydrates

Embodiment 12→Fatty acid (Degradated industrial oil, carboxyl group And / or hydroxyl group) , Carbohydrates

Embodiment 13→Cytokinin-O-glucosides(carboxyl group, hydroxyl group)

Embodiment 14→Hydroxypropylmethyl cellulose (hydroxyl group)

Embodiment 15→Maltose or other disaccharide(hydroxyl group)

Embodiment 16→Hydroxypropylmethyl cellulose (hydroxyl group)

Embodiment 17→Hydroxypropylmethyl cellulose (hydroxyl group)

Embodiment 18→Humic acid(carboxyl group, hydroxyl group)

Embodiment 19→Glucose or monosaccharide(hydroxyl group)

Embodiment 20→Hydroxypropylmethyl cellulose (hydroxyl group)

Embodiment 21→Glucose or monosaccharide(hydroxyl group)

Embodiment 22→Chitosan powder(amino group, hydroxyl group)

Embodiment 23→Polyvinyl alcohol, Chitosan(amino group, hydroxyl group)

Embodiment 24→Polyvinyl alcohol, Glucose or monosaccharide(hydroxyl group)

Embodiment 25→Hydroxypropylmethyl cellulose (hydroxyl group)

Embodiment 26→Chitosan(amino group, hydroxyl group)

Embodiment 27→Glucose or monosaccharide, plant fiber

Embodiment 28→Hydroxypropylmethyl cellulose (hydroxyl group), Polylysine(amino group) or aminosilane

Embodiment 29→Glucose, plant fiber

Embodiment 30→Grinded unhusked rice (glycan matter and calcium), plant fiber(carboxyl group, hydroxyl group)

Embodiment 31→Killed bacteria passing through peat(carboxyl group, hydroxyl group), plant fiber

Embodiment 32→Chitosan-calcium, plant fiber(carboxyl group, hydroxyl group)

※Point
@ A: claim42 →and 0.0001 to 20
percent of metal salt having at least one metal ion;
→"Decimal point five," the ratio of the components
→"Decimal point 4,"→If the paper about:→page14→ 4.2b. Oxidizing condensation solution:

Partially add (iron ions mixed with other kinds of metal ions) or separately add the foregoing 0.1~3% of metal ions or 0.1~100% of acidified, or chlorinated or hydroxidized (referring to nitrified sodium humate) or nitrified or inorganic polymers with bivalent iron ions that has an oxidizing capability for the gas. Manganese ions can be used as well, which constitutes an oxidized condensation solution.
→0.1~3%×0.1~100%=0.000001~ -----=0.0001%~ ----→"Decimal point 4,"

※Point
42. A solution of metal-polymer chelates for immobilization of a biological protein bearing biological molecules in a carrier containing at least one metal-polymer chelate, the solution for assisting in a fermentation preserving process,the solution comprising by weight:
carrier structure having a 0.1 -99.86 percent water, 0.01 - 20 percent
hydroxyl group bearing polymers having at least one carbohydrate molecule, and 0.0001 to 20 percent of metal salt having at least one metal ion;
carboxyl and amino groups combined with said a carrier structure for the carrier, the carboxyl and amino groups comprising 0.01 – 39.90 percent of a carboxyl group bearing molecules having at

least one carboxylic acid, and 0.01 - 20 percent of an amino group bearing molecules having at least one ammonia; and

a mixture of the chelates forming a chain which contains positive and negative polar functional groups, →

@ A: "carboxyl and amino groups combined with said a carrier structure for the carrier"," a mixture of the chelates forming a chain which contains positive and negative polar

functional groups:" →If the paper→The principle for these eight major enzyme systems is similar to the principle described above. Regardless of having hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or disaccharide or monosaccharide or monosaccharide bimolecule, the imitated chitosan can be combined with the metal salts and then combined with carboxyl and amino groups to produce low to mid polymer metal-polymer cholates. Some enzyme systems use inorganic polymer carrier and/or plant fiber and/or carboxyl resin and amino resin or inorganic matter and/or enzyme system and the principle for the application in biochemical and nano areas. (page10)

If the paper→FIG 3

@ A: →If the paper→ From the description above, a carboxylic acid including a –COOH group dissolves chitosan or hydroxypropylmethyl cellulose (HPMC) or the R-NH_2 includes an amino group just like the humic acid already having a carboxyl group, so that the whole solution has the amino (alkaline) group as well as the carboxyl (acidic) group, and the so-called positive and negative molecules for driving the catalysis of the whole solution. In the formation of hybrids, the negative molecule and positive molecule are adjacent to each other and gradually developed to tens or hundreds of hybrid tissues, just like the form of protein tissues. The amino acid also has an amino (alkaline) group and a carboxyl (acidic) group, and they are connected linearly to form circular bond to provide a unique configuration for each protein. Since the hybrid solution and protein tissue provide a very good compatibility for the positive and negative charges and are developed to carries of the protein substances such as cell, bacteria, enzyme, nucleic acid, DNA and RNA---- (page21)

"a mixture of the chelates forming a chain:" : →If the paper→This fermentation series such as hydroxypropylmethyl cellulose (HPMC) is a double helix structure formed by the fermentation (the hybrid structure not fermented is a single helix structure or this water soluble single helix structure can be used as a liquid crystal.---- (page163)

If the paper⟶FIG. 3 is a schematic view of the process of producing an amino polymer metal enzyme hybrid of the present invention, by reacting the carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymers with the metal ions to obtain the polymer metal hybrid, and the polymer metal hybrid further includes an amino group or an amino polymer metal hybrid obtained from the reaction to combine with an amino polymer metal hybrid containing –COOH carboxyl group for the fermentation of protein enzymes to obtain the amino polymer metal enzyme hybrid;

@ A: claim43:

Add "for immobilization of a bio-carrier"

for immobilization of a bio-carrier + protein.⟶Biological tissue

@ A: claim2⟶ amino group bearing molecules, including at least one protein.⟶

@ A: Cases such as the implementation of the 11 ammonia or proteins.

. Such as the implementation of as many as 28 cases of acid-Lai.

If the paper about: Chitosan exists in nature, and exists in human body just like a cell repairing the tissue of a human body, such as glucose or glycan-protein exist in the tissue of a human body.-------- Evidently, such kind of solution can be developed in a variety of proteins. As for the cell tissues, they are featured with a variety of proteins and used to develop diversified tissue cultivation technologies.

If the paper about: The foregoing reacting solution is a novel polymer liquid crystal material, and such biological liquid crystal features the mobility of the liquid and the sequence similar to a crystal structure. People discovered that many biological macromolecules such as RNAs, DNAs, proteins, fats, fat protein and polysaccharides have the properties of a liquid crystal,--

If the paper about:

The foregoing reacting solution is a novel semiconductor material that can fix a natural electronic component made of proteins or celluloses—

If the paper about:

For example, the proteins are used to prepare a liquid of an appropriate concentration, so that the water surface is spread into a single molecular layer film which is then placed on a quartz layer. Similarly, a layer of organic film is prepared to obtain a biofilm with a thickness of several hundreds of nanometers.

If the paper about:

A metal hybrid polymer solution is used in biochips, and the foregoing solution comes with the properties of a protein, and the protein and the inorganic polymer carriers are combined with the surface of (inorganic and organic bridge inorganic polymer or nano inorganic polymer) or polymer bridging agent, while maintaining the physical properties of the protein and the biological activity. Through the protein chip technology, we can effectively obtain a huge quantity of protein information in living organisms, and it is an important measure for studying proteins.

@ A: claim44:
Claim3 →The growth of vector animals
Add "for immobilization of a bio-carrier"→Cytokinin-O-glucosides static bio-carrier→Vector of plant growth
Add "for immobilization of a bio-carrier"→glucose or glycan-protein static bio-carrier→The growth of vector animals
monosaccharide bimolecules for monosaccharide derivatives Figure 5
(in the case of the implementation of evidence can be 13.19)

The meaning of "monosaccharide bimolecules" is showed and explained in fig 5.

Cytokinin-O-glucosides and etc in plants contain monosaccharide bimolecules.

@ A: claim45:
Add "for immobilization of a bio-carrier"
→Basic vector
If the paper about:

A specially made metal biocatalyst is added to different reacting solutions according to different reactions, and the catalyst provides a synergy for the processing of gas or chemical substance. This solution can add other precipitating agents, or add an alkali, ---

@A: The wording "R-COOH having high or middle quantity of alkyl R such as fatty acid or carbohydrate molecules" in claim4 means n has high or middle quantity when R-COOH alkyl is (R-COOH)n or R-(COOH)n.

@ A: claim46:
Add "for immobilization of a bio-carrier"
for immobilization of a bio-carrier→Nanocrystallization→metal(s) of nanometer size
@ A: metal ions in the claim by a combination of hydroxyl
› therefore, combined with metal ions can be more more.

@ A: The scope of the patent in the metal of heavy metals, transition metals, rare metals as a result of both ionic bond, metal bridge into the combination of polymer solution, in the lanthanide or actinide or radioactive metal, or difficult to bridge the metal by heating or stirring evenly mixed into the solution can be reached by bridge reaction.

If the paper about:

3. Add 1~4% of acidified or chlorinated or hydroxgenated (referring to nitrified sodium humate) or inorganic polymer monovalent, bivalent, or trivalent metal ions (which can mix two or more kinds of bivalent metal ions); and the bivalent metal ions are used primarily, and other ions are used to assist the heating, or the foregoing method is adopted such as heating and mixing the ions evenly; or the metal ions with a small ion radius must be mixed with other metal ions; or a trace of iron ion is fermented first, and then the metal ions that are difficult to be combined are added, so as to continue the fermentation and formation; or the pH value is adjusted for performing a hybrid combination and stabilizing the structure.

A chemical compound having the same chemical conditions and functions as the chitosan includes a hydroxypropylmethyl cellulose (HPMC) and an amino group, and the metal ion acts as a medium for being a catalyst for the metal ions, such that the hydroxypropylmethyl cellulose (HPMC) can be mixed with NH_3. If the hydrogen of a R-OH functional group of the hydroxypropylmethyl cellulose (HPMC) is dehydrogenated and dehydrated by the metal such that NH_2 can be halfly bridged and combines with the hydroxypropylmethyl cellulose (HPMC) to produce R-NH_2. By then, this solution is a polymer hybrid having the same chemical solution, chemical state and chemical molecular structure as those of chitosan, and becomes an artificial imitated chitosan solution containing metal ions. The bacteria or enzyme or nucleic acid or partial cell body is developed to a long-life, high-concentration bacteria or enzyme or nucleic acid or cell body carrier. The imitated chitosan of the artificial imitated chitosan solution can be used in any area that the chitosan is used. The solution is fermented to produce a metal to a nano scale, and nano metal particles or nano metal oxides or nano complex metal oxides can be obtained by gas phase or liquid phase or combustion or carbonization methods. The imitated chitosan is developed into liquid crystal solution and other aspects for the applications in eight major enzyme systems. The principle for these eight major enzyme systems is similar to the principle described above. Regardless of having hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or disaccharide or monosaccharide or monosaccharide bimolecule, the imitated chitosan can be combined with the metal salts and then combined with carboxyl and amino groups to produce low to mid polymer metal-polymer cholates. Some enzyme systems use inorganic polymer carrier and/or plant fiber and/or carboxyl resin and amino resin or inorganic matter and/or enzyme system and the principle for the application in biochemical and nano areas. A chemical compound having the same chemical conditions and functions as the chitosan includes a hydroxypropylmethyl

cellulose (HPMC) and an amino group, and the metal ion acts as a medium for being a catalyst for the metal ions, such that the hydroxypropylmethyl cellulose (HPMC) can be mixed with NH_3. If the hydrogen of a R-OH functional group of the hydroxypropylmethyl cellulose (HPMC) is dehydrogenated and dehydrated by the metal such that NH_2 can be halfly bridged and combines with the hydroxypropylmethyl cellulose (HPMC) to produce R-NH_2. By then, this solution is a polymer hybrid having the same chemical solution, chemical state and chemical molecular structure as those of chitosan, and becomes an artificial imitated chitosan solution containing metal ions. The bacteria or enzyme or nucleic acid or partial cell body is developed to a long-life, high-concentration bacteria or enzyme or nucleic acid or cell body carrier. The imitated chitosan of the artificial imitated chitosan solution can be used in any area that the chitosan is used. The solution is fermented to produce a metal to a nano scale, and nano metal particles or nano metal oxides or nano complex metal oxides can be obtained by gas phase or liquid phase or combustion or carbonization methods. The imitated chitosan is developed into liquid crystal solution and other aspects for the applications in eight major enzyme systems. The principle for these eight major enzyme systems is similar to the principle described above. Regardless of having hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or disaccharide or monosaccharide or monosaccharide bimolecule, the imitated chitosan can be combined with the metal salts and then combined with carboxyl and amino groups to produce low to mid polymer metal-polymer cholates. Some enzyme systems use inorganic polymer carrier and/or plant fiber and/or carboxyl resin and amino resin or inorganic matter and/or enzyme system and the principle for the application in biochemical and nano areas.

@ A: claim 47:

Add "for immobilization of a bio-carrier"→

b. carboxyl and amino groups combined with said a carrier structure for the carrier,

→ —COOH and -NH2

an alkyl matter: The wording "Number of R-COOH is equal to or great than one" in claim 6 has been changed to "said metal hybrid polymer solution is prepared by using one or more R-COOH". This wording means R-COOH organic acid or substance containing R-COOH organic acid. R is alkyl or alkyl substance, so R-COOH is alkyl acid or alkyl acid matter.

The "high volume" R-COOH has a high volume of alkyl R refers to the fatty acids, such as R-COOH for the alkyl (R-COOH) n or R-(COOH) n time, n has a high volume.

The article referred to "R-COOH for one or more", in which the alkyl or for the R-alkyl, R-COOH there alkyl for the carboxylic acid or carboxylic acid-alkyl matter, referring to R-COOH or organic acid-containing organic R-COOH acid material.

@ A: Carboxylic acid-COOH the representative of the R-COOH containing organic acids are applied to the material

_ as a result of conventional methods to add or stir mixture evenly heated by
- -COOH carboxylic acid and ammonia and amines, or material - can play a positive and negative elements function - R-COOH is the organic acids or organic acid-containing material show any kind of R-COOH of organic acid derivatives can achieve the effect of technology, cases could be card implementation。 By the same token ammonia or amine material is the same as the previous material can become a substitute for the mutual preservation of bio-metal-polymer combination of the wrong solution can be fermented, you can achieve the same effect in order to achieve the same technology, referred to the retention of the full text of all bio-fermentation and protein, there are articles that have characteristics of the alternative.

@ A: claim48:

Add "for immobilization of a bio-carrier"

→a. carrier structure having---

@ A: claim7 "amino polyvinyl alcohol"is amino group containing polyvinyl alcohol

@ A: The wording "degradated oils" in claim 7 means cutting bond of fatty acid in some sort or dissociative fatty acid having free radical. It is easy to bridge into a metal hybrid polymer solution.

@ A:The wording "seaweed cell wall" in claim 7 comprises ingredient of amylase and minerals. It can be bridged to metal hybrid polymer solution.

@ A:The wording "cereal such as an unhusked rice" in claim 7 means crusts of an unhusked rice having ingredient of amylase and minerals. It could be bridged to metal hybrid polymer solution.

@ A: claim49:

Add "for immobilization of a bio-carrier"

for static bio-carrier⟶ metal hybrid polymer

@ A:_By the solid-liquid separation of the metal hybrid polymer (In the case of the implementation of evidence can be 12.15.16.17.19.20.23.24.27.28.29.30.31.32)

@ A: polymer bridging agent (In the implementation of the 21 cases could be evidence from the text on the single-sugar- metal hybrid polymer system, metal polymer solution mentioned)

@ A:inorganic polymer carrier (or inorganic and organic bridge inorganic polymer or nano inorganic polymer) (In the case of the implementation of 16,23,26,28 and may be evidence from the text on the inorganic nano-, bio-chips are referred to)

@ A:carboxyl acid fiber or modification having carboxyl acid fiber (In the case of the implementation of 29, 30, 31 and may permit from the article about glucosamine, biological cells or bacteria or protein enzyme or its metabolites are referred to the train or purification)

@ A:carboxyl resin such as amberlite IRC-50 or amino resin or inorganic matter having amino or carboxyl such as polylysine or aminosilane (In the case of the implementation of 28,29,30,32 and may permit from the article about glucosamine, bio-chips, biological cells or bacteria or protein

enzyme or its metabolites are referred to the train or purification)
In a nano PVA-metal M-NH_2-protein enzyme-sugar system, the protein enzyme for decomposing sugar is used, heated, dried and disinfected to form nano inorganic polymer films, hole carriers, sphere materials in PVA-SI-M (which is a nano metal polymer) But also with the carboxyl inorganic

@ A:purification for amino metal compound or amino metal polymer or amino nano metal polymer or amino nano metal compound or nano metal polymer or nano metal compound or amino biological protein or pure biological protein.

(In the case of the implementation of 19,24,29,30,31 and may permit from the article about HPMC, glucosamine, bio-chips, biological cells or bacteria or protein enzyme or its metabolites are referred to the train or purification)

@ A:The wording "plant fiber" in claim 8 means sugarcane fiber and/or cocoanut fiber and/or kitool fiber and so on.

@ A: claim 50:
Add "for immobilization of a bio-carrier"
for static bio-carrier⟶ metal hybrid polymer+ hygroscopic agent⟶ metal hybrid polymer+ water
@ A: claim 51:
Add "for immobilization of a bio-carrier"
for static bio-carrier⟶ static bio-carrier + linear polymer bridging agents⟶higher stability of vector
@ A:The wording "the polymer bridging agent" in claim 8 has been changed to "the line polymer bridging agent". It is an agent connecting subsection micro molecule hybrid. The polymer bridging agent has a good line property. It could be connected to a line forming links.
@ A: If the paper about:

Assumed that monosaccharide, acetic acid, pure water, metal salt, ammonia water are mixed evenly, a polymer hybrid will not show, but only a single scattered micromolecular hybrid shows, and they cannot be connected into a whole piece, so that the stability and constancy of fermentation is very limited. The fermentation used to achieve the metal in a nano scale is not very effective, since the overall current is not driven. If polymer bridging agent or plant fiber or inorganic polymer carrier (including inorganic and organic bridge inorganic polymer or nano inorganic polymer) imitates the theory of a dry sugar cane fiber, the fermentation and metal nano condition of a small hybrid molecule at the connecting portion can be improved. Therefore, the formula also can be applied to the arrangement of mixing monosaccharide,

acetic acid, pure water, metal salts, ammonia water evenly and adding polymer bridging agent or plant fiber or inorganic polymer carrier, and it includes R-monosaccharide-M-NH_2-protein enzyme, and the linearity of the polymer bridging agents is better and the joining line is linear to form a bond

@ A: claim52:

Add "for immobilization of a bio-carrier"

static bio-carrier→Structure and on the other hand, the combination of bio-protein structure

@ A: Add the proliferation of fermentation (in the case of the implementation of evidence can be 8.10.11.12.13.14.16-32)

If the paper about:

, Further, a polymer unit that is not saturated with fatty acid is taken for example, and an oil is added into the acetic acid, pure water, metal salts, ammonia water, monosaccharide and mixed evenly, and then bacteria or enzyme or smaller nucleic acid or partial cell body are added for the growth of fermentation, and its solidified structure includes: fatty acid-M-NH_2-protein enzyme-sugar, and such structure can maintain a long life for the bacteria. In fact, the hybrid of carboxyl and metal ions of the fatty acid and the hybrid structure produced by the allocated amino groups can solidify and fix the enzyme protein, since this fatty acid includes high-carbon molecular R, and others include organic carboxylic acid. If there is no R that includes more carbons, and thus it cannot produce hybrid at a leading position, and thus the structure of this type of fatty acid-M-NH_2-protein enzyme-sugar is a reprint of cell tissues.

In a human body, the food source: oils (fatty acids), minerals (metal ions), proteins (amino sources), enzymes in the body, carbohydrates (rice and noodles), acidic matters (organic carboxylic acid such as onion and lemon) are matters that constitute the human body cells, and various stem cells of a human body including nerve stem cells, skin stem cells, embryo stem cells, different stem cells of internal organs. The development of these cells goes with the development of different protein enzymes, and thus the repair of human body cell requires this type of fatty acid-M-NH2-protein enzyme-sugar structure. For dietic treatments, it intentionally lacks the matters of this carboxylic acid, to suppress the quick expansion of enzymes in a human body, and the cells in the body will be composed more slowly. By then, the growth of bacteria in the human body can be suppressed. For example, such dietic treatment for a long period of time can control the disease of AIDS and cure by supplying enzymes to the patient's body. The quantity of enzymes in an AIDS patient's body is much greater than the quantity of enzymes, and thus the AIDS disease will disappear from the patient's body during the process of metabolism n body. For example, the cells in a kidney are recovered by detoxification, and the aforementioned dietic treatment method is used for the control. The patient takes the food containing the foregoing acidic matters and enzymes for supplementing the enzymes in the cell body of the kidney. As a result, the kidney function can be recovered, and this method can be applied for the area of medical science. Taking the growth of a

seed for another example, the seed includes fats (fatty acids), proteins (amino sources), starch (carbohydrates), fertilized ovules (nucleic acids) as well as minerals (metal ions) and acidic matters (organic carboxylic acids) from the soil for the germination and growth of the seed. After the seed grows, a tumor in the plant includes an opines matter such as Octopine Family or Nopaline Family, which are mid carbon (alkyl) carboxylic acid, and are structures constituted of R-M-NH_2-protein enzyme-sugar to drive the cells to continue their division, and these structure even can create cytokinin and auxin that include monosaccharide bimolecule and important chemical substance for growing the plant continuously.

If the paper about:

Another kind of biological reactors is a fatty acid-M-NH_2-protein enzyme-sugar in a semi-solid gel (a filtered solution including carboxylic acid) mixed with a R (a fiber having carboxylic acid or carboxyl resin) can imitate the tissue of human body or animal cell, which is condensed and bridged like internal organs and fixed in the included layers. By then, the slow loop refers to the nutrition solution, and a specific metabolite is cultivated, and then the cultivation is specified. The description above shows a metal hybrid polymer solution used for the cultivation and purification of the biological cell or bacteria or protein enzyme and their metabolites.

If the paper about:

for example, in the cultivation system of the hydroxypropylmethyl cellulose (HPMC), there will be no problem to cultivate single-cell blue-green algae or yeasts by using the fermented grown bacteria and enzyme solution, breaking the insect egg and putting it into the solution. More nano DNAs and RNAs are reproduced and cultivated at the top surface to form the helix shape, which is different from the original bacteria and enzyme. Evidently, such kind of solution can be developed in a variety of proteins. As for the cell tissues, they are featured with a variety of proteins and used to develop diversified tissue cultivation technologies.

The abovementioned series of fermentation solution is compared with the culture medium of the tissues of an invertebrate, much faster and capable of establishing a pure family of cell clusters. In such a solution, partial metal ions can be mixed with different inorganic salts (added respectively), depending on the cultivation requirements. After reproducing the cell, plants are transplanted in the culture medium for roots growing, while animals are transferred to the culture medium for growing. The cultivated cell solution can be mixed with the nutritious solution, and then the cell tissue will continue its development on it.

@ A: claim53:

Add "for immobilization of a bio-carrier"

static bio-carrier→Structure and on the other hand, the combination of si structure

"nano powder" →nano metal particle or nano metal oxide or nano complex metal oxide

@ A: claim54:

Add "for immobilization of a bio-carrier"

static bio-carrier→Structure and on the other hand, the combination of ion structure

@ A:When metal-polymer cholate has carboxyl, and on top of R-NH_2 including amino, such entire solution will possess amino (alkaline) as well as carboxyl (acid base) and clay mixed to obtain organic clay similar to amino acid. At this time, fermentation is feasible and then it combines with plastic and rubber polymer with a multiple compatibility.
In the content of the invention as mentioned, the claims and clay.

@ A: claim55:
Add "for immobilization of a bio-carrier"
static bio-carrier→Structure and on the other hand, the combination of ion structure

@ A: If the paper about:

Another method is to base on monomer mixing of nano metal hybrid polymer solution and plastic polymer, then use additional polymerization or condensed polymerization or combination solidification and will heat and vaporize to have a mixed forming.

Another method is based on various single mixture and plastic polymer (or carboxyl resin such as Amberlite IRC-50) before the end fermentation or its monomer mixing combination. Then use fermentation and the above feasible dispersal (fermentation will not be interfered with) or in the fermentation add polymerization or condensed polymerization or cross united solidification (referring to fermentation with no interference and will heat and evaporate so that it can become a mixed forming.

@ A: If the paper about:

However, all these will consider the stability design of the nano complex material and base on the chemical structure of polymer and the surface electric charge of nano particle of broken belt and incomplete key, there will be formation of common value chain between the two and will be achieved based on ionic bond, position key or parents and function

@ A: If the paper about:

For example, the nano metal hybrid polymer solution in the humic acid-metal zinc-NH_2-protein enzyme is used for the manufacture of nano complex rubber in the complex rubber, and a mechanical filling dispersal method is adopted. For rubber bases, the humic acid-zinc-NH_2-protein enzyme will exist in the form of separated and assembled body and it will have a cross unity enhancement function. For the humic acid-zinc-NH_2-protein enzyme of the nano class assembled enhancement rubber, there are a few characteristics: there is certain compatibility with rubber and there is suitable reaction activity with rubber. There is certain self assembly ability. The even assembly matter of the separated assembly body has a better inner assembly ability. The induction of rubber is to enhance the cross unity efficiency (including cross unity speed and cross unity density). To improve the structure of the cross unity key (induce more ion cross unity key), it will

generate joining and cross unity with large rubber molecules and then it will be heated and vaporized in the mixing and blending. The humic acid will be completed in the reaction to produce carbonization. Therefore, the temperature will progressively enter into a high temperature from a low temperature. The low temperature is to bring out its reaction and the high temperature will end soon, so that the carbonization will disappear. What remains is a combination of nano zinc or zinc oxide. For the mechanical function of the nano zinc filling rubber, the contractability for pulling is higher. In the nitrile butadiene rubber (NBR) in that form, 10% of nano zinc is filled, and the contractability of its vulcanized rubber can reach up to 55Mpa, which is the maximum rubber intensity except for the short fiber complex rubber.

@ A: If the paper about:

The aforementioned metal hybrid polymer solution is characterized in that the metal hybrid polymer solution used in the nano plastic or nano textile industry includes plastic or rubber polymers, wherein the plastic or rubber polymer is polyamide, polyimide, polyethylene, polyvinyl chloride, polyaniline, polystyrene, polyphenylenevinylene, acrylonitrile-styrene-butadiene, polyethylene oxide, epoxy resin, bakelite, polycarbonate, polypropylene, polyacrylic ester, polyester, polyurethane, polyolefin, polyvinyl butyral, polysiloxanes, pinene oxide (PNO), rubber, nitrile butadiene rubber (NBR), silicone, polyvinylpyrrolidone or its precursor or its oligomer or the foregoing modification and blend system.

@ A: claim56:

Add "for immobilization of a bio-carrier"

static bio-carrier→The structure of the free electronic meeting place→an oxidation process to produce oxygen anions

@ A: Embodiment 1,2,→Plus bacteria can ferment→

Unfermented and fermented prior to the implementation of the application cases there

→If the paper about: * A metal hybrid polymer solution, being used for biological batteries:

The foregoing reacting solution is a novel biofuel battery material that can use specific gene and/or enzyme to receive lights or other stimulations, and the electron reaction produced inside constantly conducts electrons to accumulate electrons and cause an electromotive force, so as to produce a current, or the enzyme of an electric generating system in the body of an electric eel is used to develop the generation of electricity. For example, the seeds of alfalfa sprout in a plant are originally at a sleeping state, and the alfalfa sprout will be germinated if radiations such as ultraviolet rays are provided. Similarly, the genes and enzymes of the germinating alfalfa sprout are extracted and used for the oxidation of the chitosan-NH_2-M-protein enzyme to produce anions,----

@ A: claim57:

Claim16 →A: Metallic structure material

→ overall molecular size

→ size of the overall degree of polymerization

→ tendency to oxidation or condensation

Add "for immobilization of a bio-carrier"

static bio-carrier→Loose and tight structure of degrees in the solution

→Non-biodegradable reaction

→Decision used for a condensation, or oxidizing condensation

→If the paper about:

Metal ions are used as a medium for mixing hydroxypropylmethyl cellulose (HPMC) with NH_3, if hydrogen in the R-OH functional group of the hydroxypropylmethyl cellulose (HPMC) is dechlorinated and dehydrated to produce R-M by the metal ions:

a. If the reacting quantity of the metal ions is small and the reacting quantity of the amino groups is relatively large, the hybrid structure will not be tight, so that the ionization of the metal ions is increased greatly, the activity is improved, and the catalytic sensitivity is raised accordingly, and it tends to have the characteristics of an oxidizing condensation.

b. If the reacting quantity of the metal ions is relatively large, and the reacting quantity of the amino groups is relatively high, then the hybrid structure will be tight, and a condensation will be conducted.

c. If the reacting quantity of the metal ions is too large and the reacting quantity of the amino groups is relatively large, then a precipitation will occur, and many metal ions is half-bridged by a-R main body, and R already has amino groups which can greatly facilitate the ionization of electrons, and an oxidation will be conducted to form anions at the oxygen gas and produce oxygen cations.

NH_2 can be half-bridged with hydroxypropylmethyl cellulose (HPMC) to form R-M-NH_2:

a. If the reacting quantity of the amino groups and the reacting quantity of the (metal) ions are not too large, then many metal ions are half-bridged with a-R main body, and connected to an electric hole, for moving the ionized electron to an opposite direction, and thus a degradation will be conducted to form a PVA hybrid, and increase the level of polymerization. It tends to have a gelation, and the adorability of the structure is increased, and the high temperature carbonization can be used as an adsorber.

b. If the reacting quantity of the amino groups and the reacting quantity of the metal ions are large, thenNH_2 shows a bridge (ionization and jumping) on the metal-polymer hybrid, and by then the sensitivity of condensation is enhanced significantly, and the reaction can be conducted when it

is dried.

c. If the reacting quantity of the amino group and the reacting quantity of the metal ions are small, then R-metal-NH_2 cannot be connected to form a reaction mechanism, and both will jump back and forth, and a slow condensation will be conducted.

d. If the reacting quantity of the amino groups is large, then the stability of the solubility of bacteria and enzyme will be high, because the bacteria and enzyme are dissolved by nitrogen.

@ A: "a condensation, including at least one oxidizing condensation" : condensation > oxidizing condensation

@ A: "oxidizing condensation" : Simultaneous oxidation and condensation reaction

@ A: Embodiment 1,2,4,5,6,7,29→Plus bacteria can ferment→

Unfermented and fermented prior to the implementation of the application cases there

→If the paper about:

At present, there is a dry system of bacteria and enzyme that can provide excellent vitality. If the foregoing series of reacting solution has an oxidized condensation, and its reacting structure is R-M-NH_2, wherein there is a trace of metal (M), and in the bridge protein enzyme and its R-a trace of M-NH_2-protein enzyme structure is an unstable hybrid structure (due to) the trace of M, and gives rise to a (shift) jump of each NH_2-protein enzyme at the metal M. Although, it is a dry structure, the metal shifts and jumps in the whole hybrid in such a way similar to the shifting of the conducting ions. Just like in the water, the dry structure shows a good activity for the reactions and functions. For example, hydroxypropylmethyl cellulose (HPMC) is dissolved in vitamin C, and a trace of metal salts together with a normal amount of amino groups plus protein enzyme are added, the activity and function of the dry protein enzyme become very well, so as to greatly extend the applicability of the protein enzymes from simply working for liquid phase reactions to gas phase and solid phase reactions as well. The foregoing Vitamin C and iron ions play the role of a series of electron streams for the reduction and oxidation. If there is too much Vitamin C, then the bivalent iron ions cannot be oxidized to change their valence, but tend to be condensed because Vitamin C has a strong resistance to the oxidation. If there is too little Vitamin, then the bivalent iron ions will change their valence and will not be reduced, so that the oxidizing power is weakened. Therefore, the two are correlated to the whole hybrid.

Embodiment 4

In the application of processing organic solver in a condensation solution (which could be for fermentation and nano applications), the composition in percentage by mass is given as follows:

Embodiment 6

In the oxidized condensation solution (could be used for fermentations and nano applications), the composition in percentage by mass is given as follows:

@ A: claim58:

Claim17 →A: Solid misprinted material + metal + live microbes nano

→ solid-liquid separation

→ solid metal body structure of the chelates material

; See (the implementation of cases also applies to state fermentation 8 · 29)

Add "for immobilization of a bio-carrier"

static bio-carrier→metal-polymer chelate→ Lose R-COOH→Lose bio-protein

→pure material(R-M- NH_2)

artificial imitated chitosan→hydroxypropylmethyl cellulose mimic of chitosan in fig1,2

@ A: "monosaccharide imitated glucosamine" : monosaccharide →monosaccharide - metal-NH_2

→glucosamine(R-M- NH_2)

@ A: claim59:

Claim18 →☒

A: Solid misprinted material + metal + live microbes nano

→ solid-liquid separation

→ living microorganisms or their metabolites

; See (the implementation of cases also applies to state fermentation 8 · 30 · 31 · 32)

Add "for immobilization of a bio-carrier"

static bio-carrier→Bacteria carrier + There is no"Bacteria nutrition"

biological protein cultivation or purification

→Bacteria carrier (Solid-state)+ There is "Bacteria nutrition"

→By the solid-liquid separation of the metal hybrid polymer+ There is metabolites of "Bacteria nutrition"

static bio-carrier→biological protein and their metabolites cultivation or purification

a biochemical reaction→ Industrial, agricultural(Non-soil with), biological and chemical use, environmental protection, and energy use

@ A: If the paper→ about biological protein cultivation or purification: (In the implementation of the 30.31.32 cases could be evidence)

Further, the fiber containing carboxyl acids or modified fibers containing carboxyl acids or carboxyl resins such as amberlite IRC-50, pure water, cereal of a plant such as unhusked rice , ammonia water are mixed evenly for the fermentation of a polymer hybrid, and the smashed unhusked rice includes a glycan matter and calcium and shows a R-glycan matter-calcium-NH_2-protein enzyme, which is a R-unhusked rice-NH_2-protein enzyme, and R refers to the smashed fiber including carboxylic acid (plant fiber or carboxyl resin such as amberlite IRC-50), and it is not necessary to add acetic acid for very good stability and constancy of the fermentation. This semi-solid matter is filtered to produce a liquid, which is a protein enzyme

having no carrier and will not be contaminated easily, and thus it does not require any purification to obtain a solution of high-purity high-yield cell or bacteria or enzyme or vaccine. The solution can be used to cultivate and purify various different biological protein enzymes. Further, the R-seaweed cell wall (containing calcium)-NH_2-protein enzyme can follow the foregoing method to purify the solution of high-purity high-yield cell or bacteria or enzyme or vaccine, but it is necessary to prepare the disinfection measures first. Further, the combination of R-peat-calcium-NH_2-protein enzyme, solid peat and calcium will not be precipitated, and the peat contains a humic acid with the properties of a glycan matter. The humic acid further contains the properties of carboxylic acid, and thus the peat-calcium-NH_2-protein enzyme structure may have R (fibers of carboxyl acid or carboxyl resin) to achieve a high-purity high-yield cell or bacteria solution or enzyme or vaccine, but it is necessary to prepare the disinfection measure for the peat first. For R-hydroxypropylmethyl cellulose (HPMC) and humic acid and calcium-NH_2-protein enzyme, the hydroxypropylmethyl cellulose (HPMC) and humic acid and calcium are mixed and gone through a pH-balanced precipitation to form a hybrid solid combined with calcium and filtered and mixed with the ammonia for fermentation to form hydroxypropylmethyl cellulose (HPMC) and humic acid and calcium-NH_2-protein enzyme. Such structure may have R (fibers of carboxyl acid or carboxyl resin) to achieve a high-purity high-yield cell or bacteria solution or enzyme or vaccine. Further, the R-chitosan and calcium-NH_2-protein enzyme can follow the foregoing method to purify the solution if high-purity high-yield cell or bacteria or enzyme or vaccine. The required enzyme solution can be filtered from the carrier, and those not used will be put back to the carrier for bridging and preserving the activity of the enzyme solution. Particularly, some vaccine or enzyme cultivation used for human bodies and animals does not require a carrier system accompanied to enter into a human body, and this kind of purifications is the most appropriate one because it is much simpler and easier than the technologies of affinity chromatography and anion-exchange chromatography (HPLC). If the fermented and purified matter does not need any remaining amino groups, the suspension and cultivation of amino resin or inorganic matter such as polylysine or aminosilane can substitute ammonia for the fermentation, and then the purification is a typical application of the metal hybrid polymer solution for the cultivation and purification of biological cell or bacteria or protein enzyme.

Similarly, the foregoing technology of carriers having biological cell or bacteria or protein can be used for the cultivation and purification of non-protein such as bacteria metabolite and products, and the cultivation of general bacteria metabolite and product is to add a nutrient agent into the bacteria solution, so that the life cycle of the bacteria includes metabolism and growth, and the life cycle, growth, progress, and cultivation method and medium are designed according to the required metabolite. The quantity of carrier systems in accordance with the foregoing technology is the major factor for controlling the metabolism and growth of the bacteria. Different metabolism requirements fit different carrier systems, and the number of

carriers can control the growth rate of bacteria and the required nutrition for the metabolism and the metabolic product. For instance, the more the carrier, the faster is the bacteria racing for the nutritients, and the slower is the metabolic rate. By then, it is appropriate for the antibiotics in the bacteria to be cultivated. The less the carrier, the more is the productions, and the more is the nutritient. The metabolic growth will become stable, and the yield will be stable. The half cycle achieved by the carrier system in accordance with the foregoing technology is very long, and is almost unlimited. It is one kind of biological reactors capable of continuously performing the biotransformation by a mobile blending reactor or a fixed-bed reactor or a moving bed reactor or super filtering film separating reactor, and the metabolite can be filtered and separated easily, and the purified metabolite can be removed by the bacteria in the body by microfiltration or disinfection or other method. Another kind of biological reactors is a fatty acid-M-NH_2-protein enzyme-sugar in a semi-solid gel (a filtered solution including carboxylic acid) mixed with a R (a fiber having carboxylic acid or carboxyl resin) can imitate the tissue of human body or animal cell, which is condensed and bridged like internal organs and fixed in the included layers. By then, the slow loop refers to the nutrition solution, and a specific metabolite is cultivated, and then the cultivation is specified. The description above shows a metal hybrid polymer solution used for the cultivation and purification of the biological cell or bacteria or protein enzyme and their metabolites.

@ A: claim60:

Claim19 →A: Nano Metal + live microbes

→ double catalyst

; See (the implementation of cases also applies to state fermentation8 ، 25 ، 26)

Add "for immobilization of a bio-carrier"

@ A: static bio-carrier→Non of"Loose and tight structure of degrees in the solution"

+ metal(s) of nanometer size+ biological protein

→metal(s) of nanometer size+ biological protein→metal enzyme biocatalyst

@ A: static bio-carrier→Loose and tight structure of degrees in the solution

+ metal(s) of nanometer size+ biological protein→the metal hybrid polymer solution(condensation, or oxidizing condensation)+ metal enzyme biocatalyst

@ A: claim61:

Claim20 →A: Metallic substances in non-ionic state structure

→ Metallic structure anion or cation state of matter

→ Fungicides

Add "for immobilization of a bio-carrier"

static bio-carrier→To create biological antibody protein
static bio-carrier→hydroxyl group bearing polymers and metal is trace components→Adsorption of bacteria sterilization
Without '' main skeleton of the bio-carrier"→the solution is being used in a disinfectant→The main structure is the existence of micro-, trace the main structural changes to attract adsorption, and then change around the bactericidal
(in the case of the implementation of evidence can be 9)

@ A: Globulin antibody is, for the majority of antigen protein, which are dissolved in water colloidal solution, precipitation does not occur naturally. Hydrocolloids such a mechanism is due to the formation of a large number of proteins containing the amino and carboxyl residues, these residues in solution ...
@ A: When a hydrophilic group (such as-oh,-nh2 and-cooh) antibody and the antigen corresponding to the close proximity, they can form hydrogen bond bridges, so that combination of antigen and antibody
@ A: If the paper

@ A: Since the PVA does not have asymmetric carbons, it only can maintain the life of bacteria without a good duplicating capability. If there are asymmetric carbons in the aforementioned situation, the life of bacteria can be maintained and a good duplicating capability is provided as well.

Embodiment 9

In disinfectant solution, the composition in percentage by mass is given as follows:

Bacteria-free water	93.9894%
Sodium fatty acid	3%
Magnesium sulfate	0.01%
Ammonia water or urea	3%

Adsorption of bacteria sterilization

For example, if the foregoing disinfection solution is applied to the affected part of a beriberi patient, it will take half a day to kill the germs completely.

@ A: claim62:
Claim21 →A: chelates body substance + metal + live microbes nano
→ There will not live a full mutation in microorganisms
→ life problems

; See (the implementation of cases also applies to state fermentation 10 ‧ 14)

@ A:for immobilization of a bio-carrier→Preservation of potency and biological activity of a few→The existence of long-lived

@ A: Save the moment or time saved: Sugar-free systems such as PVA

Save a few months: Systems such as sugar

Save for one year: Systems such as chitosan

The permanent preservation of: For example, the system HPMC

Liquid preserved: For example, the preservation solution

Solid-state preservation: For example, save chip

(In the implementation of the 10 cases could be evidence)

@ A: If the paper

2. Description of the Related Art

---and the reacting carriers at early days came with a very short life. However, the physiologically active life of the present hydroxypropylmethyl celluloses (HPMC) and other matters with special functional groups can be extended unlimitedly and developed to be an artificial imitated chitosan solution containing metal ions, so as to provide high-efficiency, high-density, high-activation and long-life biological carriers. The metal hybrid polymer solution is used for gas detections and the solution also becomes a metal enzyme biocatalyst.

The metal hybrid polymer solution can be developed further to provide novel biochemical enzyme systems and enzyme immobilization systems. The immobilization and preservation of bacteria rely on nitrogen gas for the preservation for a long time. The related cultivation and purification are not easy at all and always get contaminated easily, and thus it is necessary to change the carrier after a specific period of time. The concentration of bacteria cannot reach a high level, and thus the potency is very limited. When bacteria are cultivated, the metabolism issue of the nutrition sources is generally taken into consideration, but the chitosan solution or chitosan or humic acid imitated by the hydroxypropylmethyl cellulose (HPMC) at a specific combination does not need to consider the metabolism issue of the nutrition sources anymore. The metal hybrid polymer solution is used to replace the conventional culture medium with a powerful cultivation of bacteria, enzymes, nucleic acids and cells and also used to develop biological proteins and purifying its metabolite.-----

SUMMARY OF THE INVENTION

---The bacteria or enzyme or nucleic acid or partial cell body is developed to a long-life, high-concentration bacteria or enzyme or nucleic acid or cell body carrier. The imitated chitosan of the artificial imitated chitosan solution can be used in any area that the chitosan is used. The solution is fermented to produce a metal to a nano scale, and nano metal particles or nano metal oxides or nano complex metal oxides can be obtained by gas phase or liquid phase or combustion or

carbonization methods. The imitated chitosan is developed into liquid crystal solution and other aspects for the applications in eight major enzyme systems. The principle for these eight major enzyme systems is similar to the principle described above. Regardless of having hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or disaccharide or monosaccharide or monosaccharide bimolecule, the imitated chitosan can be combined with the metal salts and then combined with carboxyl and amino groups to produce low to mid polymer metal-polymer cholates. Some enzyme systems use inorganic polymer carrier and/or plant fiber and/or carboxyl resin and amino resin or inorganic matter and/or enzyme system and the principle for the application in biochemical and nano areas.---

--Now, the chemical solution and chemical state and chemical molecular structure are the same as those of chitosan which is a polymer hybrid and will become an artificial imitated chitosan solution containing metal ions and then bacteria or enzyme or smaller nucleic acid or partial cell body is added. It is not necessary to consider its nitration sources and metabolism issues After being blended and shaken for a period of time (which is determined by the size of the reaction tank, and generally equal to two weeks), the metal ions excite the activity of the enzyme, and a rear end of theNH_2 group is connected to a protein enzyme, and an amino polysaccharide such as molassesm with a quick fermentation growth life, a super high concentration, a highly active cell body or bacteria or enzyme or nucleic acid solidifies a carrier to produce a biochemical solution having cell body or bacteria or enzyme or nucleic acid. If the solution of artificial imitated chitosan has a hydroxypropylmethyl cellulose (HPMC) with a higher molecular weight, the stability of bacteria or enzyme stability will be high, and the life expectancy will be long, and it will not be saccharified easily. If the molecular weight is low, then the CPS400 will be as follow:

Just like a common chitosan, it will be saccharified easily to turn into glycan, bacteria or enzyme, and the preservation cannot last too long, and its life expectancy is about one year. In general, the life expectancy of a normal pure chitosan solidified enzyme is very short, but the life expectancy will become one year if the metal ions are added, and the life expectancy will be even longer if humic acid is added to the metal ions to cope with the amino groups. However, the imitated solution of hydroxypropylmethyl cellulose (HPMC) synthesized under CPS400 is simply like the common chitosan that has a higher compatibility with human body, and primarily uses calcium. If the hybrid is stable, the solution can be used as a gauze for the medical treatment of human body. For the solution synthesized at CPS400 or above:

In the CPS75000, the larger the CPS, the higher level is the hybrid polymerization, and the more oleophilic is the CPS75000. It is soluble in water with a disperability and its life is unlimited and forever, so that it can be used in related chitosan of cell body or bacteria or enzyme or nucleic acid used for preserving system, duplicating system, environmental protection, chemical engineering, cosmetics, biochemical, agriculture, fishery, and livestock, and such artificial imitated chitosan solution containing metal ions can be used. If the diversity of the ecological environment of living things including bacteria or enzyme state is taken into consideration, the expiration for those using

CPS400 is preferably set to less than a year. If it is used for the fermentation, a chill spray can dry the solution into a solid state for the application and manufacture of chitosan. Another method uses carboxyl resins to substitute acetic acid to dissolve HPMC, so as to achieve the same result as described above.

@ A: claim63:

Claim22 →A: Metallic structure material

→ some of the organizational structure for the human body

→ Food Health Care

; See (the implementation of cases also applies to state fermentation 11)

Add "for immobilization of a bio-carrier"

static bio-carrier→Enhanced patch→Vigorous fermentation metabolic adjustments→Application of the protection of health

static bio-carrier→Full of protein to eat healthy food biotechnology

→Added enzyme→Health promotion

@ A: "health cares-applications." : Application of the protection of health

If the paper about:

In a human body, the food source: oils (fatty acids), minerals (metal ions), proteins (amino sources), enzymes in the body, carbohydrates (rice and noodles), acidic matters (organic carboxylic acid such as onion and lemon) are matters that constitute the human body cells, and various stem cells of a human body including nerve stem cells, skin stem cells, embryo stem cells, different stem cells of internal organs. The development of these cells goes with the development of different protein enzymes, and thus the repair of human body cell requires this type of fatty acid-M-NH2-protein enzyme-sugar structure.

If the paper about:

Another kind of biological reactors is a fatty acid-M-NH_2-protein enzyme-sugar in a semi-solid gel (a filtered solution including carboxylic acid) mixed with a R (a fiber having carboxylic acid or carboxyl resin) can imitate the tissue of human body or animal cell,--

If the paper about:

Chitosan exists in nature, and exists in human body just like a cell repairing the tissue of a human body, such as glucose or glycan-protein exist in the tissue of a human body. The imitating chitosan solution of metal ions can also imitate the tissue of a human body to develop the cultivation of cells and reproduction of nucleic acid and DNA, --

If the paper about:

For chicken feeding as an example, using the feed developed by the structure of the fatty acid-M-NH_2-protein enzyme-sugar with an addition of enzyme accelerant, chicken can be grown up rapidly within 45 days without any side effect. Therefore, we can use it to develop the rapid culture of animals and plants and the sexless reproduction technology.

Enzyme cells thrive→Cell Health→Health
@A: claim64:
Claim23 →A: Metallic structure material
→ some of the organizational structure for plants
→ chemical production plants
; See (the implementation of cases also applies to state fermentation 13)
Add "for immobilization of a bio-carrier"
static bio-carrier→a biological cell or bacteria or protein enzyme or its metabolite cultivation or purification→It also can cultivate the chemical substances required in a plant

If the paper about: example, the seed includes fats (fatty acids), proteins (amino sources), starch (carbohydrates), fertilized ovules (nucleic acids) as well as minerals (metal ions) and acidic matters (organic carboxylic acids) from the soil for the germination and growth of the seed. After the seed grows, a tumor in the plant includes an opines matter such as Octopine Family or Nopaline Family, which are mid carbon (alkyl) carboxylic acid, and are structures constituted of R-M-NH_2-protein enzyme-sugar to drive the cells to continue their division, and these structure even can create cytokinin and auxin that include monosaccharide bimolecule and important chemical substance for growing the plant continuously.

Now, we can control the DNA and RNA of the plant, and the carrier of the plant, and the photosynthesis mechanism and nutrition sources of the plant, so as to produce specific chemical substances of the plant. For example, the production condition of a plant in a fermentation tank controls the light, water, minerals and bits of organic hydrocarbons and ionized ammonia nitrogen, carbon dioxide, DNA and RNA that uses the following cultivation and purification of the biological protein enzyme as a carrier (such as the R-unhusked rice-NH_2-protein enzyme system) to combine and include the monosaccharide bimolecule-M-NH_2-protein enzyme system, and it also can cultivate the chemical substances required in a plant.

Further, the fiber containing carboxyl acids or modified fibers containing carboxyl acids or carboxyl resins such as amberlite IRC-50, pure water, cereal of a plant such as unhusked rice , ammonia water are mixed evenly for the fermentation of a polymer hybrid, and the smashed unhusked rice includes a glycan matter and calcium and shows a R-glycan matter-calcium-NH_2-protein enzyme, which is a R-unhusked rice-NH_2-protein enzyme, and R refers to the smashed fiber including carboxylic acid (plant fiber or carboxyl resin such as amberlite IRC-50), and it is not necessary to add acetic acid for very good stability and constancy of the fermentation. This semi-solid matter is filtered to produce a liquid, which is a protein enzyme having no carrier and will not be contaminated easily, and thus it does not require any purification

to obtain a solution of high-purity high-yield cell or bacteria,or enzyme or vaccine. The solution can be used to cultivate and purify various different biological protein enzymes.

A metal hybrid polymer solution, being used in a biological cell or bacteria or protein enzyme or its metabolite cultivation or purification→It also can cultivate the chemical substances required in a plant.

@ A: claim65:

Claim24 →A: Metallic structure material

→ Some suitable for gene replication and carrier structure

; See (the implementation of cases also applies to state fermentation 11 、 13 、 14)

Add "for immobilization of a bio-carrier"

static bio-carrier→Adaptability of bio-carrier→cells or bio-tissue(s).

@ A: Its function is to copy the progress of biological protein

If the paper about:

In this series of applications for the fermentation for genetic engineering, the DNA and RNA can be duplicated quickly. Unlike the prior art that requires complicated procedures for cultivating DNA and RNA, the foregoing eight major enzyme systems have different interfaces, so that when two different cultivating interfaces are adjacent to each other, variations will occur during the process of duplicating DNA and RNA. From these variation, we can learn the adaptability of DNA and RNA at different cultivation tissues, and the DNA and RNA in human body fit the cell tissue of human body, and those of animals fit animals, and those for plants fit plants, and those for species fit species correspondingly. Therefore, the invention can be used for duplicating DNA and RNA, studying variations, and developing special gene-cell tissues. For example, if a cell of the epidermis of a human body is bitten by a bug, then new protein enzyme is injected to show a swelling. The SARS proteins and fruit foxes can coexist, but the varied proteins will behave irregularly in the carrier of the cells in human body cell and the adaptability does not exist anymore. In other words, we are sure that the variation of the gene-cell performance shows us that the fruit fox and the carrier of the cells of human body are different. For example, the bird flu will be varied to infect a human body, and a long-term cell carrier is incompatible to a 45-day growth hormone, and thus the size and stability of the enzyme and the adaptability of the carrier of cells are related to the performance of the genes. Therefore, special applications for gene-cell tissues can be developed.

@ A: claim66:

Claim25 →A: chelates body substance + metal ions

→ Drying nano structure of metal material mistake

→ nano-filtration system; See (the implementation of cases also applies to state fermentation 7 、 8 、 15 、 16 、 23 、 24)

for immobilization of a bio-carrier→metal-polymer chelate→thin-film(s)→a nano filtration system→nano filter →in fig4 (In the implementation of the 15 cases could be evidence)

static bio-carrier→metal-polymer chelate→thin-film(s)→a nano filtration system→A polar nano-filtration (an amino nano metal polymer, In the implementation of the24、30、 32 cases could be evidence after the solid-liquid separation ； a nano metal polymer, In the implementation of the 24 cases could be evidence)

@ A: claim67:

Claim26 →A: chelates body substance + metal ions + live microbes

→ nano structure of metal material mistake

→ Nanomaterials

； See (the implementation of cases also applies to state fermentation 16 、17)

Add "for immobilization of a bio-carrier"

static bio-carrier→Nanocrystallization→Pure nano material

@ A: If the paper about nano material : (In the implementation of the 16 cases could be evidence)

In the nano technology, usually it remains 10-6 nano after a metal solution is dried. To achieve a nano scale of 10^{-9} m, a sol-gel method for transforming the solution to an organic metal first. The chemical process is difficult and confiscated as well. However, nowadays the protein enzyme is almost of the nano scale, and in the aforesaid enzyme system or hydroxypropylmethyl cellulose (HPMC) enzyme system, the internal R-metal ions-NH_2-protein enzyme is at an interactive state. Since the protein enzyme will be fermented into the metal hybrid system to form an organic metal and in the solution the positive attraction force and an opposite attraction force will be mutually attracted, and it will lead to a miniaturization of metal ions and a nano scale. Using this technology, different kinds of metal ions can be nanonized for a variety of applications in different fields. In principle, a protein enzyme with a nano scale can have more nano metals and vice versa. If the nano quantity is smaller, its nucleic acid will be even smaller. The quantity of nano metal can be set. Some different protein enzymes have different metal crystal-phases. Those protein enzymes eating up heavy metals can even create a special crystal-phase structure. Hybrid with a higher molecular weight and that with a lower molecular weight will get different crystal-phase structure based on the same bacteria fermentation. For obtaining high yield of nano metal, metal ions with highest rate approximately equal to 10% can be added into the enzyme system or add 10% fermentation first then ass some metal ions, however, the fermentation should be carried out during mixing procedure to avoid any precipitation. For obtaining smaller nano quantity, the metal ions specified in the hybrids table should be dosed. In the reacting solution forming hybrid, if the metal ions are impossible to be combined, it can be heated and mixed evenly; or for metal ions with smaller ion radius, they should be added and mixed with other metal ions; or after half fermentation of a trace of iron ion, add the metal ions which are difficult to be combined, for the purpose of continuation of fermentation and forming. Later, to obtain the nano iron. For obtaining metal, using the magnet to separate the iron for purification; or adjust the pH value to get the hybrid combined, structure tends

to be stable etc. method.

or in the water solution to add thermal decomposition, then add precipitating agent ;

or in vacuum state the liquid get vaporized to decompose the compound metal gas, then recycle by condensation;

or to be added in an oil pot for thermal decomposition first, then add water for cooling, precipitation and recycling;

or in the liquid using the oxidizer, O^{-2} strong oxygen degradation hydrocarbon and amino to get the CO_2, H_2O, N_2 gases blown away.

@ A: claim68:

Claim27 →A: chelates body substance + metal ions + live microbes

→ nano structure of metal material mistake

→ nano-materials processing applications

; See (the implementation of cases also applies to state fermentation 16 、 17 、 18 、 19 、 23 、 24)

Add "for immobilization of a bio-carrier"

static bio-carrier→Nanocrystallization→Mixing process

being used for the nano inorganic matter→ nano powder in nano inorganic matter

@ A: If the paper about nano inorganic matter : (In the implementation of the 16.23.26.28 cases could be evidence)

inorganic polymer carrier (or inorganic and organic bridge inorganic polymer or nano inorganic polymer)

A novel automatic fermentation method for carrier materials and the natural inorganic carrier of a honeycomb hole can produce many tiny bacteria and living organisms, since the inorganic matter has numerous minerals and decayed ionization media, and the novel carrier materials are prepared based on the foregoing theory to form a carrier having an inorganic metal-polymer cholate and bacteria, and its major advantage is its waterproof function. For example, 7kg of PVA powder is added to water and dissolved into an aqueous solution, and then 15kg of silicic acid solution, 6kg of metal salts are added and mixed evenly, and then dipped into the carrier material, such that the carrier material can be dried slowly and sintered into a ceramic form. By then, the structure is a PVA-SI-M metal, and then chitosan solution including carboxylic acid is added to the ceramic carrier material, and a trace of bacteria is added into the chitosan solution and combined slowly with each other to form a PVA-SI-M-chitosan, and the bacteria will be fermented automatically and slowly on the whole carrier to form a PVA-SI-M-chitosan-protein enzyme. By then, the carrier of inorganic metal-polymer hybrid including bacteria has an inorganic system that can be used for related inorganic and organic applications. The PVA is added with silicic acid, and the –OH groups of the two are dehydrated to form a PVA-SI-M-NH_2-protein enzyme-sugar connecting structure. If

the protein enzyme uses a protein enzyme for decomposing sugar and the alcohol to kill bacteria, a volatile solution is formed or heated, dried and disinfected to form a nano inorganic polymer film showing a PVA-SI-M, wherein silicon will not be precipitated from the reaction, and SI and M are both in a nano scale, and the PVA can use other R (polymer) including –OH coating layer and show a hybrid porous structure that has good adsorptability and it is a very good nano inorganic carrier and can be used as nano paint, nano particles entering this carrier or paint, and it is also a very good reacting structure. Through the metal hybrid, the fermented silicic acid becomes a very good inorganic medium. The nano inorganic polymer film, hole carrier, and sphere developed by the nano metal hybrid polymer solution (fermented) is more functional than those not in a nano scale. In general, PVA-SI-Ca is used to obtain a good stability and functionally a PVA-SI-other metal is preferred and used. This is one of the applications of the metal hybrid polymer solution used for nano inorganic matters.

@ A: If the paper about nano ceramic: (In the implementation of the 17 cases could be evidence) one can see the kind of nano powder is mixed evenly in there or the intention to obtain the pure nano powder to form nano ceramic. Then, it is heated or ore-sintered and is mixed evenly or oxygen gas is added in the reaction, and then the nano- oxidized metal can be obtained. Alternatively, nitrogen gas can be added similar to the way of mixing it in nano nitrified metal. By adding the fluoric acid, we can obtain the nano fluride metal. By obtaining phosphoric acid, we can obtain the nano phosphoric acidic metal.

Metal hybrid polymer solution to be added with silicic acid first to become the PVA-silicic acid-metal M-NH_2-protein enzyme-sugar, it is the R-silicic acid-M-NH_2-protein enzyme-sugar. The -OH radical of the Rand silicic acid and the metal M together with hybrid, after fermentation, the metal will get nanonized. The silicone (Si) can also be nanonized, and can be extended to become a nitrified silicone, carbonization silicone, siliconized complex metal nanonization, using nano material production heat treatment or during the ceramic firing reaction process to add nitrogen or shortage of oxygen or add other nano metal hybrid polymer solution to yield the nano silicone compound or to be mixed directly into the ceramic processing technology to produce the nano complex ceramic material. Additionally, for example, the metal hybrid polymer solution after fermentation, the metal can be nanonized; or in the ceramic process the fermentation metal hybrid polymer solution to be added directly, and in the firing process to get the desired nano complex ceramic material, one can see the kind of nano powder is mixed evenly in there or the intention to obtain the pure nano powder to form nano ceramic. Then, it is heated or ore-sintered and is mixed evenly or oxygen gas is added in the reaction, and then the nano- oxidized metal can be obtained. Alternatively, nitrogen gas can be added similar to the way of mixing it in nano nitrified metal. By adding the fluoric acid, we can obtain the nano fluride metal. By obtaining phosphoric acid, we can obtain the nano phosphoric acidic metal. Based on these methods, one can separate and precipitate or generate crystals or mix the crystals into a ceramic craft to produce a nano complex ceramic material, and nano complex ceramic materials can be made by using the fermentation metal hybrid polymer solution (that can be mixed in many types). In the course of dispersion, the matireal has

already possessed moisturized powder. After mechanical dispersion and stabilization, the mixing can be conducted by means of a colloid grinding machine. Amongst these, the fermentation chitosan or hydroxypropylmethyl cellulose (HPMC) or polyvinyl alcohol nano system can have the characteristic of a cohesive agent, so that the dispersed mixture can be more stable to avoid a reunion phenomenon. It also can control the quality of the turbid solution, so that the base structure even can enter into a forming (a press forming or a casting forming) and ore-sintering or simultaneous proceeding of forming and ore-sintering. During ore-sintering, the wrapped and moist solution of metal-polymer cholate will form be carbonized just like the way in a carbon black wrapping combustion and a heat treatment, and the carbon black will be oxidized. The most important factors are the control of pressure and temperature in the ore-sintering process. The ore-sintering process is separated into a reaction ore-sintering, an atmosphere ore-sintering, a heat pressure ore-sintering, a discharged plasma ore-sintering, an ultra high pressure ore-sintering, a heat static pressure ore-sintering, a high pressure ore-sintering and a high pressure gas phase reaction ore-sintering etc. What kind of nano structures and products is required for the above ore-sintering method? In the most important course, we do not have reunion and crystal growth to obtain a high-quality nano ceramic. For example, in a titanium oxide metal hybrid polymer solution (fermentation hydroxypropylmethyl cellulose (HPMC) system), the reaction is taken place at a temperature of 50℃ and a humidity of 60%, and then a titanium oxide gel is obtained. After pouring and forming on the gel, a biscuit of titanium oxide can be obtained. The biscuit obtained will have ore-sintering when it is closed to the temperature change for anatase phase and rutile phase. In other words, with the conditions at a temperature under 600℃ and a density of 99%, the size of nano ceramic crystal grains is only 60nm. Under general conditions, the density temperature of nano is between 800-1000℃. By dense ore-sintering under 600℃, it will sufficiently utilize the function of metal hybrid polymer solution during a phase change of nano. Although the temperature of 600℃ is comparatively low, yet the energy generated from the phase change can promote the proceeding of ore-sintering and still provide us with dense nano ceramic.

@ A: If the paper about nano plastic : (In the implementation of the 18 cases could be evidence)

Chemical dispersion: Surface chemistry modifier or compatibilizer or breaker such as hydrochlorous acid solution is added, and then mixed into the nano metal hybrid polymer solution and plastic polymers, so that the metal hybrid can separate and combine with plastic polymers.

In another method of nano metal hybrid polymer solution and polymer latex solution mixing such as dispersal of latex grain of latex. Then add in the flocculatin agent to disperse so that the entire system can be sedimented, centrifugal separation or water dehydration, heat dry and vaporize.

When metal-polymer cholate has carboxyl, and on top of $R\text{-}NH_2$ including amino, such entire solution will possess amino (alkaline) as well as carboxyl (acid base) and clay mixed to obtain organic clay similar to amino acid. At this time, fermentation is feasible and then it combines with plastic and rubber polymer with a multiple compatibility.

@ A: If the paper about nano textile industries : (In the implementation of the 19 cases could be evidence)

Solution polyster fiber: Most of the base materials used by the solution spinning are polypropylene. Normally the metal hybrid polymer solution is added directly into the polyester fiber solution and mixed with the melted spinning. Also, the ceramic inorganic salt can be dispersed to the metal hybrid polymer solution of the chitosan or hydroxypropylmethyl cellulose (HPMC) system and then a further fermentation is conducted and it is added into the spinning solution.

@ A: claim69:

Claim28 →A: chelates body substance + metal ions + live microbes

→ Nano Metallic substances biochip structure

→ living organisms protein processing applications

; See (the implementation of cases also applies to state fermentation 20 · 21 · 27 · 28)

Add "for immobilization of a bio-carrier"

static bio-carrier→ Semiconductor charge

@ A: If the paper about biochips : (In the implementation of the 27.28 cases could be evidence)

A metal hybrid polymer solution is used in biochips, and the foregoing solution comes with the properties of a protein, and the protein and the inorganic polymer carriers are combined with the surface of (inorganic and organic bridge inorganic polymer or nano inorganic polymer) or polymer bridging agent, while maintaining the physical properties of the protein and the biological activity. Through the protein chip technology, we can effectively obtain a huge quantity of protein information in living organisms, and it is an important measure for studying proteins. Like gene chips and protein chips, the method for fabricating these chips in the metal hybrid polymer solution, the probe for printing/ink-jet printing of the solution and micro-manufacturing technology used in the microelectronic industry such as micro-printing, piezoelectric printing (same as the ink-jet printer), optical mask lithography, reacting ion etching, micro molding casting and polymerized film casting method can be used for the manufacture of base materials for the nano inorganic polymer carriers and the applications of separating biological samples or reacting with a microstructure having micron dimensions. For instance, a nano inorganic polymer carrier is coated with a layer of plastic insulating film, for controlling a very narrow focus X-ray beam or electron beam by an electronic computer, and drawing parallel lines on the plastic insulating film, and the width of the lines is equal to tens of nanometers, and the distance between two lines is equal to 200-250nm. Ethanol is used to dissolve a portion of plastic where the light beam is projected and etch several crevices for exposing the nano inorganic polymer. Now, the monosaccharide-M-NH_2-DNA (already fermented from the plant fibers) is "grafted", and then the position where the plastic insulating film and monosaccharide-M-NH_2-DNA are attached is washed. We also can set the M on the monosaccharide-M-NH_2-DNA as a transmitting pulse for the metal

(such as silver) if needed. It is a biological integrated circuit, and the amino resin or inorganic matter such as polylysine or aminosilane is a fermented metal hybrid polymer solution. With the solid-liquid separation of the solution (since there is no amino enzyme, the preservation does not last long), the "grafting" as described above will be conducted immediately for the amino resin or inorganic matter such as the polylysine or aminosilane chip carriers.

In a microfluidic electrophoretic chip, a nano inorganic polymer is adopted for building its base; lithography is used for etching the designed path; testing sample and testing reagent are added into the microchannel; the protein adsorbing surface in the microfluidic chip is increased; and a high analytical sensitivity and a short testing time are achieved. This protein chip can be used for stabilized the activity of proteins in the carrier, such that protein engineers can obtain a large quantity of dedicated proteins used for fabricating the chips. If fermented chitosan or hydroxypropylmethyl cellulose (HPMC) nano system is used for fabricating biochips, the invention is applicable for microscopic printing and piezoelectric printing methods. To obtain the information on the behavior of the conductive bond of a DNA, a DNA a metal ion, and a molecular wire of a polymer hybrid, if the surface of a DNA is covered with more metal ions, then it is R-monosaccharide-M-NH_2-DNA, wherein R refers to a nano inorganic polymer film that forms the electric conducting DNA chain, which can be used in a nano biocircuit. To obtain an active protein, the metal hybrid polymer solution must use the method of increasing the activity by a dry protein enzyme to fabricate biochips. For example, R-monosaccharide-M-NH_2-DNA together with vitamin C and iron metal or other carboxylic acids and silver metal are used to design the biochips, and the plant fiber-monosaccharide-M-NH_2-DNA (fermented) is used as an intermediate process, and then the monosaccharide-M-NH_2-DNA is extracted and printed on the R which is a nano inorganic polymer film, and changed to a bridge structure of a nano inorganic polymer film-monosaccharide-M-NH_2-DNA, so that the dry biochips can promote protein enzymes to improve the activity and maximize the medical testing function of the biochips and provide various different applications. If the nano inorganic polymer film-monosaccharide-Ca-NH_2-DNA on the biochip is at this state, the metal ion will be Ca or a complex Ca metal, and the protein enzyme on the chip must have water (moisture absorbability) or must be electrically conducted to enhance the activity, so as to achieve the control of the activity of the protein enzyme on the chip.

@ A: claim70:

Claim29 →A: chelates body substance + metal ions + live microbes

→ Nano Metallic biological structure of biomass material

→ living organisms ions in processing applications

; See (the implementation of cases also applies to state fermentation 22)

Add "for immobilization of a bio-carrier"

static bio-carrier→Conductive media→Microelectronics charge

@ A: And the recent invention is very similar to chlorophyll organic battery

@ A: "biological batteries" : being used for biological batteries⟶being used for batteries

If the paper about: The foregoing reacting solution is a novel biofuel battery material that can use specific gene and/or enzyme to receive lights or other stimulations, and the electron reaction produced inside constantly conducts electrons to accumulate electrons and cause an electromotive force, so as to produce a current, or the enzyme of an electric generating system in the body of an electric eel is used to develop the generation of electricity.

external circuits: chitosan-NH_2-M-protein enzyme + Anode materials

electrolyte : PVA-metal M-NH_2-protein enzyme-sugar system + LiI

Pt electrode: Pt

@A: claim71:

Claim30 ⟶A: fatty acid system, the chelates body substance + metal ions + live microbes
⟶ Nano Metallic biological structure of biomass material
⟶ purification of fatty acids
; See (the implementation of cases also applies to state fermentation 3 、 4 、 5 、 7 、 12)
Add "for immobilization of a bio-carrier"
static bio-carrier⟶Media⟶Purification or to create material or to improved material

@ A: Fatty acid system of a metal hybrid polymer solution (fatty acid-M-NH_2-protein enzyme-sugar) as a result of the oil can be fermented 、 it can be fermented to the quality of the oil or the oil production of culture.

@ A:claim23 the production of chemical matters of a plant(fatty acid-M-NH_2-protein enzyme-sugar)⟶nurturing fatty acids⟶processing an oil product

@A: claim72:

Add "for immobilization of a bio-carrier"

static bio-carrier⟶static bio-carrier in liquid-solid separation⟶pure material

@ A: If the paper about the metal-polymer:

Further, the compound or polymer in the metal-polymer cholate can use the plant fiber and/or the carboxyl resin including a carboxyl group for the dissolution, and ammonia is added to the bridge compound or polymer of the metal ions for driving the amino solution, and then the carboxyl resin or plant fiber can be performed with a solid-liquid separation and purification to produce an amino metal compound or an amino metal polymer. Such amino matter is at a polarity state and provides various different applications. If the foregoing metal-polymer cholate uses plant fibers and/or carboxyl resins including carboxyl groups as an acid for the dissolution for the fermentation, ammonia or amino resin or inorganic matter such as polylysine or aminosilane will be used as an amino bridge, and a solid-liquid separation is conducted after the fermentation to obtain amino nano

metal polymer or amino nano metal compound or nano metal polymer or nano metal compound or amino biological protein or pure biological protein, and their application will be used as described below.

Respectfully Submitted,

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Applicant and Inventor

25 May 2011

Date